

Enter Serial No. here

MANUAL No.Y-BX-25UL

In the event of an enquiry please quote this serial number.



# OPERATING AND MAINTENANCE MANUAL

## BX-DD SMARTBAKE OVEN

WARNING LABEL, TO REDUCE RISK OF FIRE  
OR ELECTRIC SHOCK  
DO NOT REMOVE COVER (OR BACK)  
NO USER SERVICEABLE PARTS INSIDE  
REPAIR SHOULD BE DONE BY AUTHORISED PERSONNEL ONLY



**Failure to follow the cleaning and maintenance instructions detailed in this owners manual could affect the warranty of this oven.**

# CONTENTS

<b>PART 1.0</b>	<b>Introduction.</b>
<b>PART 2.0</b>	<b>Dimensions.</b>
<b>PART 3.0</b>	<b>Specifications.</b>
<b>PART 4.0</b>	<b>Safety.</b>
<b>PART 5.0</b>	<b>Installation.</b>
<b>PART 6.0</b>	<b>Isolation.</b>
<b>PART 7.0</b>	<b>Daily Cleaning.</b>
<b>PART 8.0</b>	<b>Weekly Cleaning.</b>
<b>PART 9.0</b>	<b>SMARTBAKE operating instructions</b>
<b>PART 10.0</b>	<b>SMARTBAKE programming instructions.</b>
<b>PART 11.0</b>	<b>Using "MONOLINK 6" programming software. (using a laptop for recipe programs)</b>
<b>PART 12.0</b>	<b>Light bulb Replacement.</b>
<b>PART 13.0</b>	<b>Replacement parts list.</b>
<b>PART 14.0</b>	<b>Electrical information.</b>

# 1.0 INTRODUCTION

The BX-DD Smartbake oven is a computerised, compact, electric convection oven with steam capability and a capacity of three 26" x 18" trays.

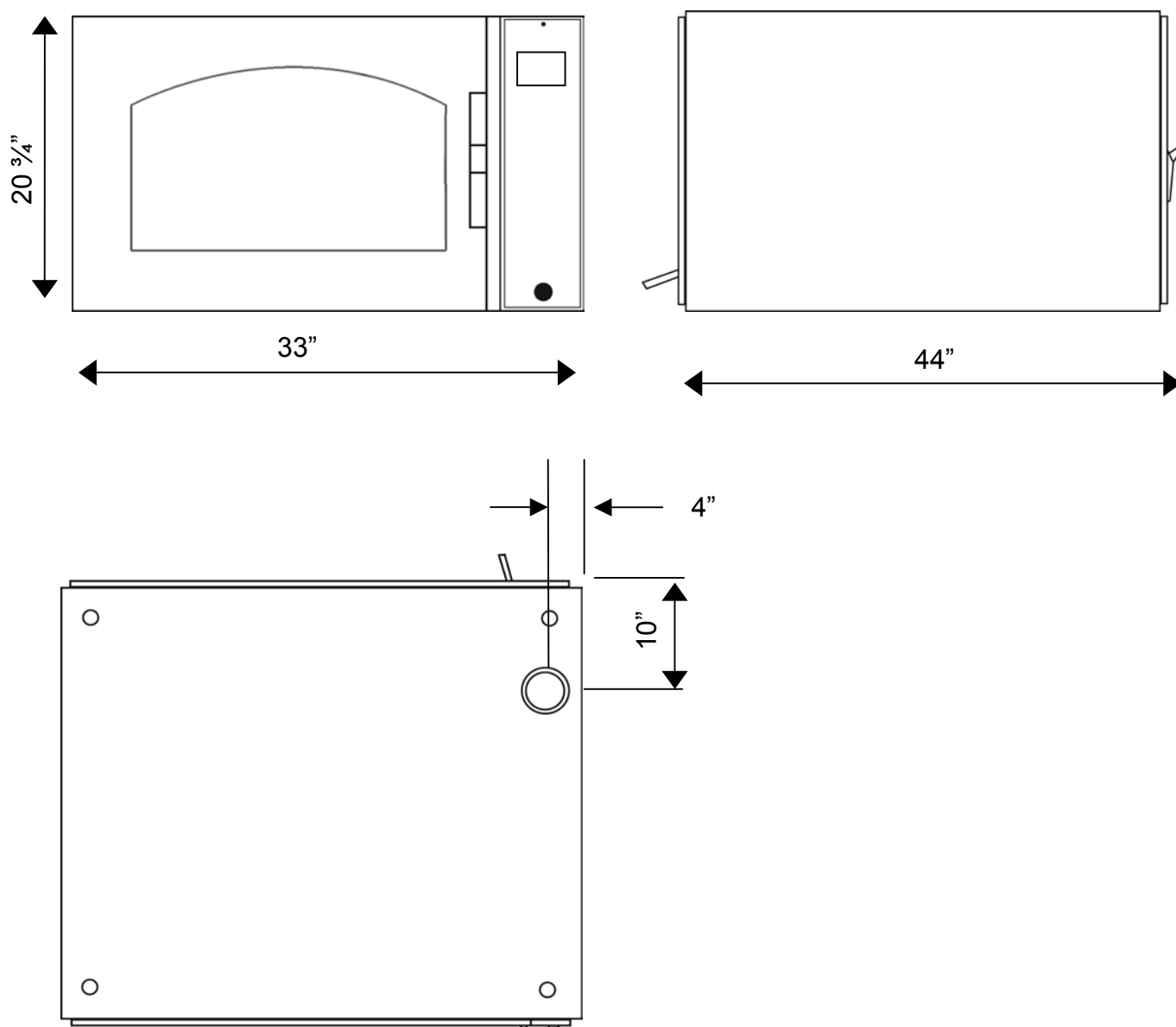
The oven is constructed of stainless steel and features the state of the art smartbake controller with color display and 99 programmable recipes each with up to six steps in which the bake time, temperature, steam time, fan and vent can be controlled.

Designed to be stackable, without the requirement for a separate support.

The high-speed fan and ring element provides efficient air circulation and an even bake across a range of products



## 2.0 DIMENSIONS



Height: 20"  
Depth, door closed: 44"  
Width: 33  $\frac{1}{4}"$

2" (50mm) clearance is required at the back and sides of the oven to allow adequate circulation of air.

## 3.0 SPECIFICATIONS

Total Power:	7.5 kW.
Electric:	208V/220V Three phase + Neutral + Ground; 60Hz. 24Amps per phase.
Supply Cable:	6 feet of cable with L21-30 plug supplied.
Loading:	7kW Ring element
Fan Drive:	Direct to motor
Tray Size:	26" x 18"
Tray Capacity:	3.
Damper:	Butterfly type.
Noise Level:	Less than 85dB.
Water Supply:	20 PSI Cold water.

- For proper operation of the steam system it is recommended that the water supply follows the following specifications:

**Hardness** 0-4 grains per gallon

**PH range** 7.0 to 8.5

**Chloride concentration** 0 –30 ppm

**Calcium** 0 – 4 ppm

**Magnesium** 0 – 4 ppm

**Alkalinity** 0 – 20 ppm

**Consult your water treatment company for proper water filtration system information.**

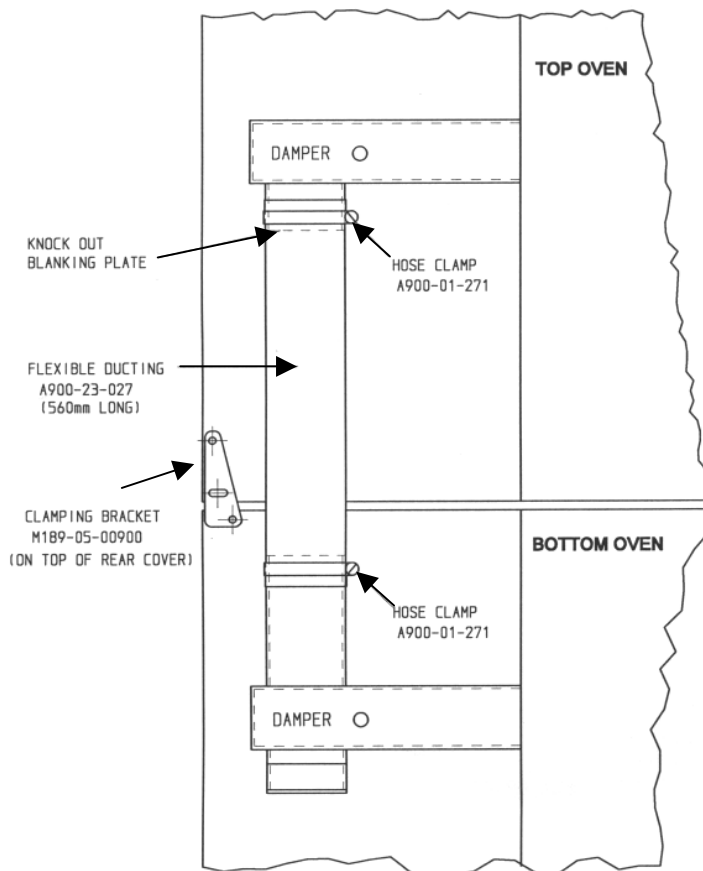
## 4.0 SAFETY

To safely use this convection oven, read this owners manual completely and follow these warnings and the other warnings in this manual while operating the oven.

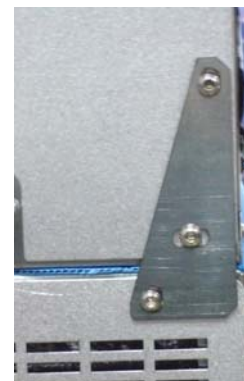
- The oven is designed for the baking of bread, confectionery and savoury products. Do not use it for baking other items without first consulting Adamatic.
- All repairs and maintenance of electrical units must only be carried out by an authorized Adamatic service technician.
- Electrical access panels must not be opened unless the oven power cord is unplugged.
- All connections to the oven must be made in accordance with all National, State, and local codes and regulations.
- While the oven is in operation, and for some time after use, DO NOT TOUCH the oven window and surrounding area as these surfaces may be hot.
- The oven must be operated as described in this manual.
- Use only original manufacturer spare parts on the oven.
- The construction of the oven must not be changed or altered.
- **The owner of the oven is legally obligated to instruct staff** using the oven in its operation and in these safety regulations. The instructions must be readily accessible for the operator.

## 5.0 INSTALLATION

- **Water Supply;** It is the customer's responsibility to provide an appropriate water treatment system that will supply water that meets the water specification listed on page 6.
- **Ambient temperatures : -**  
Maintain ambient temperatures below 115° F (40° C) around the oven
- **Clearance:**  
Provide 2" (50mm) clearance at the back and sides of this oven and 10" clearance at the top to allow adequate air circulation.
- **Initial Cleaning:** Carefully wipe the interior and exterior of the oven thoroughly with a clean cloth soaked in warm soapy water before using the oven for the first time.
- **Stacking two ovens**



- 1 UNPLUG OVENS
- 2 PLACE STACKING RING OVER VENT ON BOTTOM OVEN
- 3 PUT TOP OVEN IN PLACE ALIGNING STACKING RING WITH HOLE IN BOTTOM OF OVEN
- 4 REMOVE OVENS REAR COVERS. KNOCK OUT BLANKING PLATE IN BOTTOM OF VENT TUBE OF TOP OVEN. (FIXED WITH SILICONE SEALANT)
- 5 REMOVE KNOCKED OUT BLANKING PLATE AND DISCARD.
- 6 FIT ONE END OF FLEXIBLE DUCTING OVER BOTTOM OF THE VENT TUBE ON TOP OVEN AND TOP OF THE VENT TUBE ON THE BOTTOM OVEN AND SECURE IN PLACE WITH HOSE CLAMPS.
- 7 REPLACE OVENS REAR COVERS AND FIX CLAMPING BRACKETS (M189-05-00900)



CLAMPING BRACKET M189-05-00900  
(RIGHT SIDE SHOWN)

## 6.0 ISOLATION

**To stop the oven in an emergency,  
Unplug the oven from the outlet.**

## 7.0 DAILY CLEANING INSTRUCTIONS

**NOTE: UNPLUG THE OVEN FROM OUTLET AND ALLOW TO COOL COMPLETELY BEFORE CLEANING**

- The equipment is to be cleaned daily using approved chloride – free cleaners.
- NEVER USE STEEL WOOL TO CLEAN OVEN.
- Sweep any debris (after it has been allowed to cool) from oven interior surfaces onto oven removable catch tray and remove for cleaning.
- Wipe oven front, back and sides using a damp cloth that has been soaked in a solution of mild detergent and hot water

### **IMPORTANT**

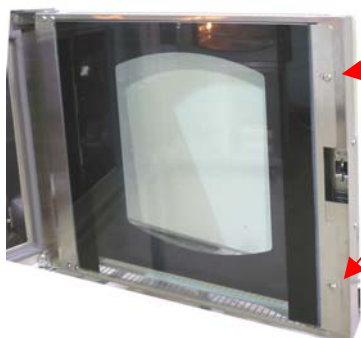
- 1) **NEVER SPRAY THE OVEN DOWN WITH A HOSE.**
- 2) **TO AVOID ELECTROCUTION OR OVEN DAMAGE –NEVER ALLOW WATER, STEAM, CLEANING SOLUTION, OR OTHER LIQUIDS TO ENTER THE ELECTRICAL PANELS OR CONNECTIONS.**
- 3) **DO NOT REMOVE THE REAR PANEL INSIDE THE OVEN.THIS ALLOWS ACCESS TO THE FAN ASSEMBLY AND COULD CAUSE INJURY.**

## 8.0 WEEKLY CLEANING INSTRUCTIONS

**NOTE: UNPLUG THE OVEN FROM OUTLET AND ALLOW TO COOL COMPLETELY BEFORE CLEANING**

Complete daily check then:

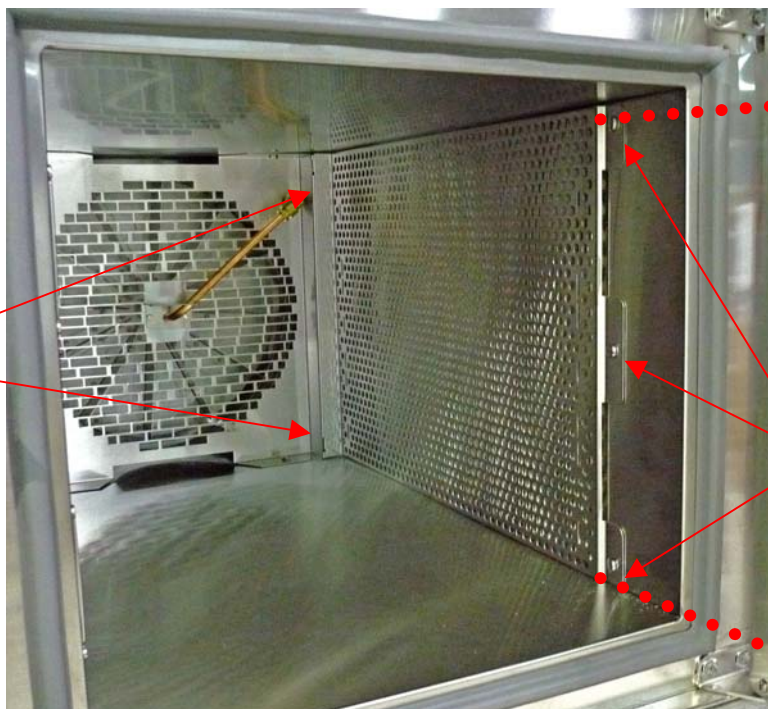
- The inner door glass is hinged to enable cleaning of internal surfaces. To open, remove the two screws shown below. The internal surfaces of the door glass can then be cleaned using a suitable glass cleaner.



Remove these screws to release inner glass for cleaning

- Remove interior side panels by removing three screws in front of oven and sliding side panels out of the door. Clean side panels and interior surfaces with mild detergent and hot water using a nylon cleaning brush.

Carefully install interior side panels by aligning tabs in rear of panel with slots in the rear panel. Align holes in front of interior side panel with nutsert in sides of oven and secure with three screws.

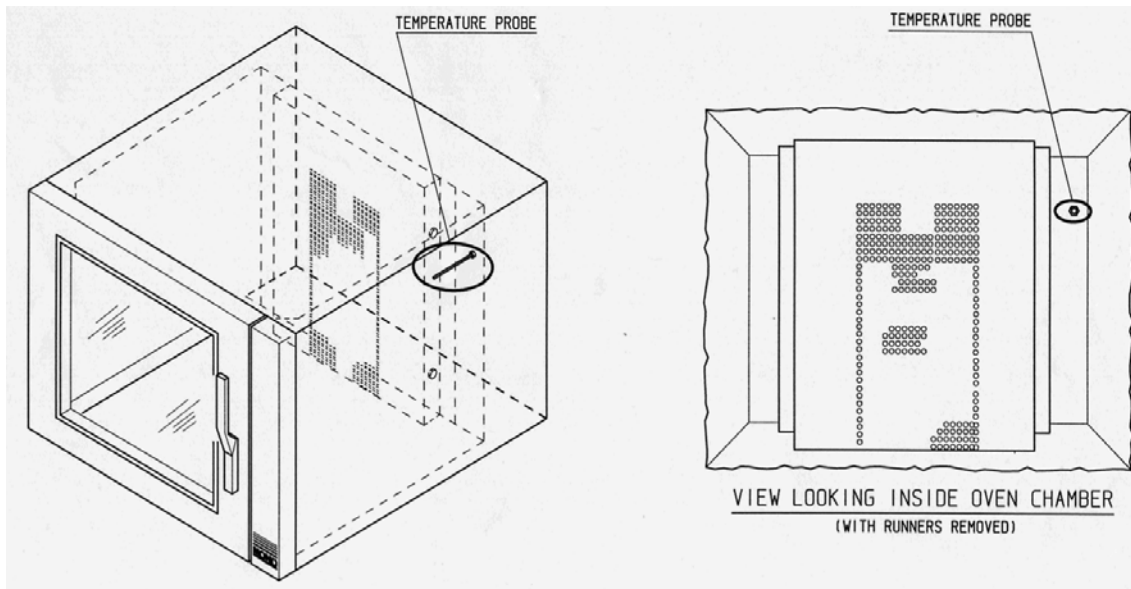


SLOTS

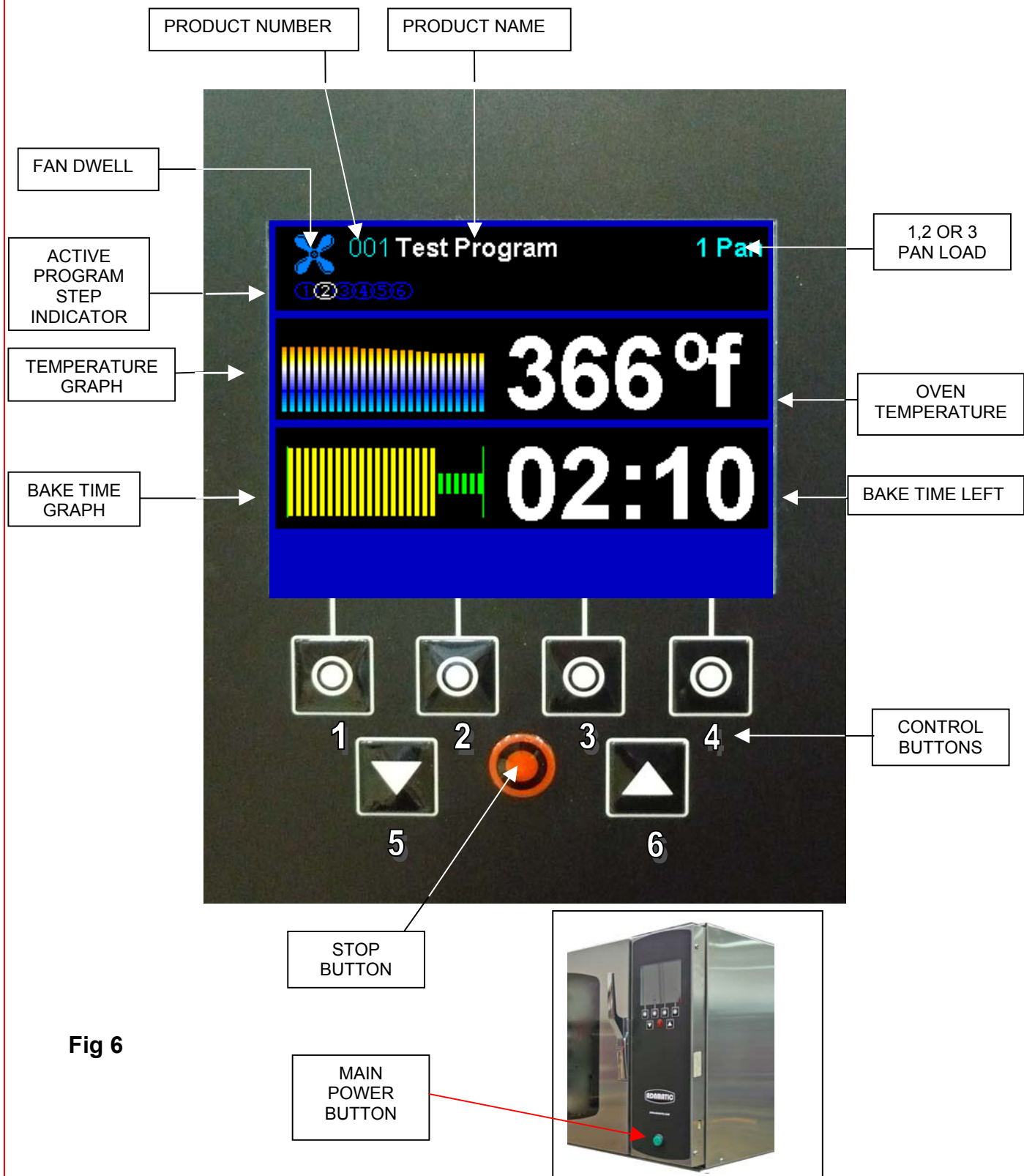
SCREWS

**IMPORTANT:**

- 1) **WHEN CLEANING INSIDE OVEN, CARE MUST BE TAKEN NOT TO DAMAGE TEMPERATURE PROBE PROTRUDING FROM UPPER CORNER OF CHAMBER REAR WALL. (SEE BELOW)**



- 2) **TO AVOID ELECTROCUTION OR OVEN DAMAGE –NEVER ALLOW WATER, STEAM, CLEANING SOLUTION, OR OTHER LIQUIDS TO ENTER THE ELECTRICAL PANELS OR CONNECTIONS.**
- 3) **DO NOT REMOVE THE REAR PANEL INSIDE THE OVEN.THIS ALLOWS ACCESS TO THE FAN ASSEMBLY AND COULD CAUSE INJURY.**



**Fig 6**

## Smartbake Control Panel

## 9.0 SMARTBAKE OPERATING INSTRUCTIONS

1. Connect water ensuring there are no leaks.
2. Plug oven into appropriate wall outlet.
3. Turn oven on by pressing green main power button, and the following screen will appear: -

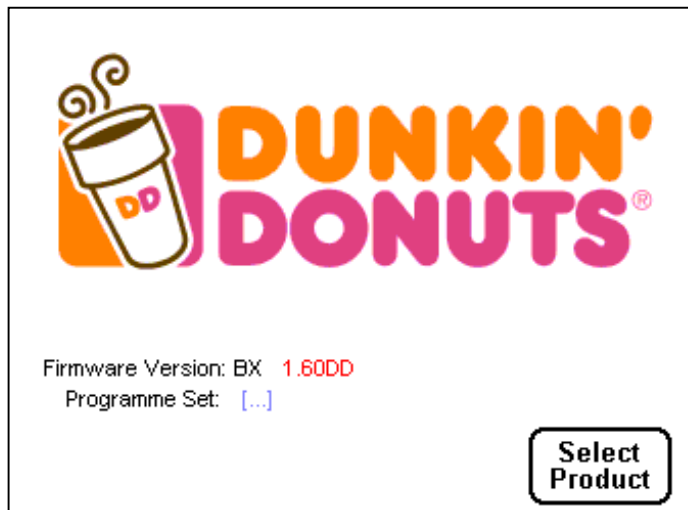


Fig 1

4. Press control button (4) under select product icon and program list appears (see fig 2).

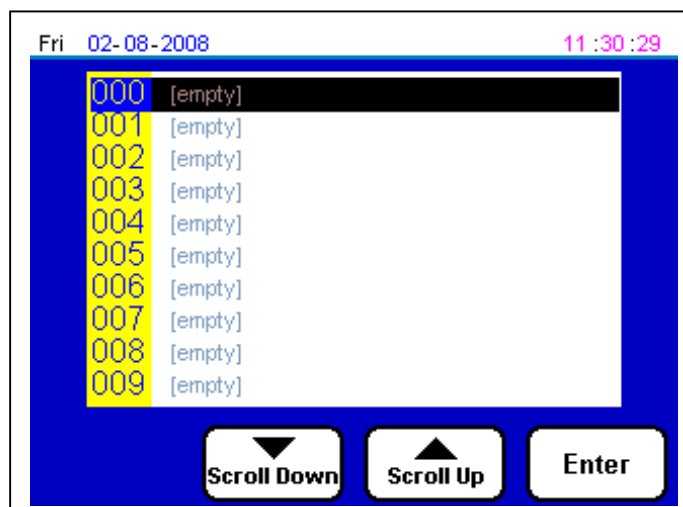


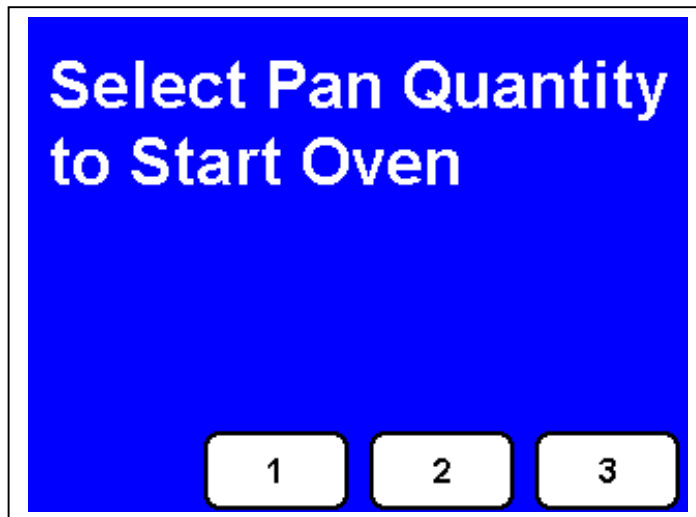
Fig 2

5. Highlight the desired program by pressing (2) under the scroll down icon or control button (3) under the scroll up icon.

NOTE.

Pressing control button (5) will scroll down an entire screen and control button (6) will scroll up an entire screen.

**Press button under the enter icon.**



6. Choose 1, 2 or 3 pan buttons as required and oven will start to heat. (Fig3)

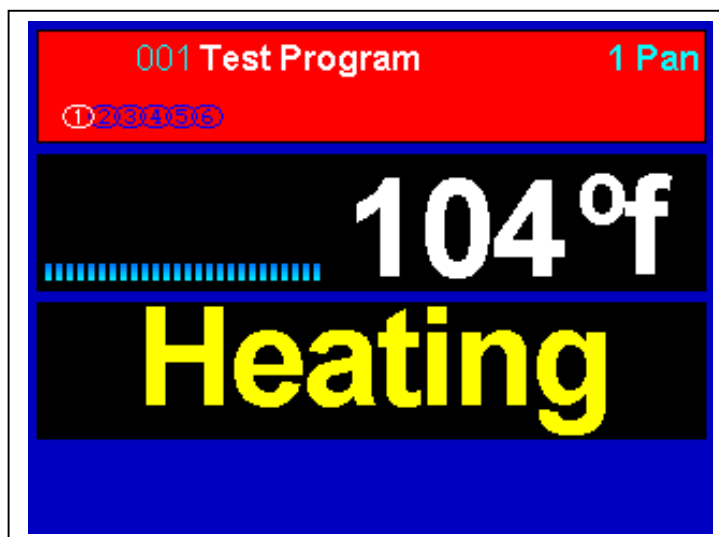


Fig 3

To stop heating press stop (o) at any time.

7. When oven is ready it will beep three times and the following screen will appear (fig 4).  
Load product and press control button (4) under the start icon



Fig 4

8. When the set time to turn the pans reaches zero, the buzzer will sound 3 times.  
Open the door, remove tray and turn round then replace it back in the oven.  
Close the door and the bake will continue.

9. At the end of bake time, buzzer will sound, and (fig 5) will be displayed.  
Press stop (o) and remove product. Shut door to conserve heat.

**OR**

press key 4 under +1 min icon to increase bake by 1 minute increments  
(-1 min button allows a decrease in time setting if too much is entered)

*(press stop at any time to stop bake)*



Fig 5

10. This will now take you back to program screen (Fig 2).
11. To bake in pre-heated oven, select new program with keys 2 and 3. Follow instructions 6 – 8.

**NOTE:** During heating (1) can be pressed at any time to check settings. (Press (1) or wait 10 seconds to return to previous screen).

**Until oven is up to temperature the display will show “ HEATING”.**

**When correct temperature is reached display will show “READY”.**

**The oven will keep to set temperature until bake is started.**

**Oven will keep up to temperature of last product baked or new item on program list if chosen.**

## 10.0 SMARTBAKE PROGRAMMING INSTRUCTIONS

1. Press stop (o) to get to first screen



Fig 7

2. Press and hold (2) for 5 seconds for pass code screen Fig 8.

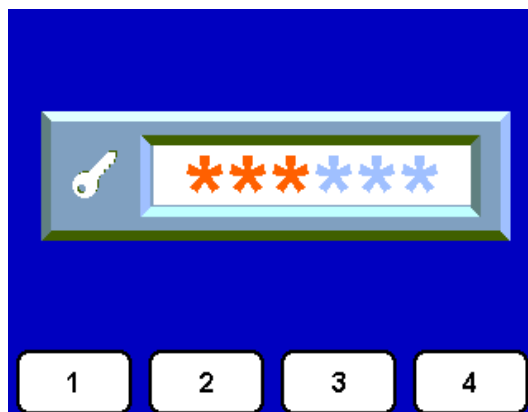


Fig 8

3. Enter pass code (default 111111). Fig 9 will appear.

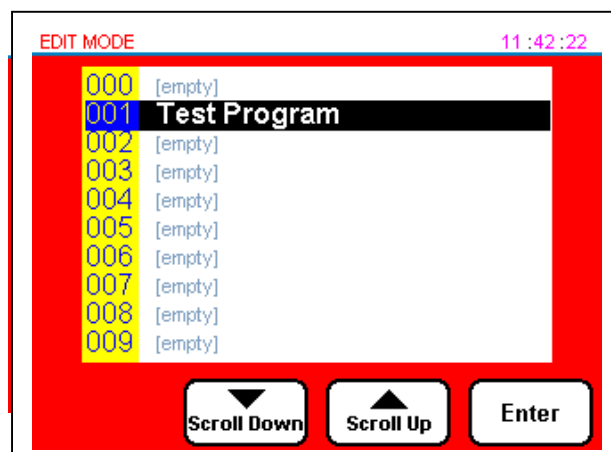


Fig 9

3. Use scroll buttons to highlight the required product. Press enter. All parameters can now be set.

The oven is capable of six different phases per bake and if a lower number is required, bake time can be left at "0" to leave that phase inoperative.

- To move **across** the screen press (4)
- To move **back** press (1)
- To **increase** value of parameter press (3)
- To **decrease** value of parameter press (2)

## POWER LEVELS

## TEMPERATURE

## BAKE DURATION

(minutes)

## TURN TIME

(minutes)

## STEAM DURATION

(seconds)

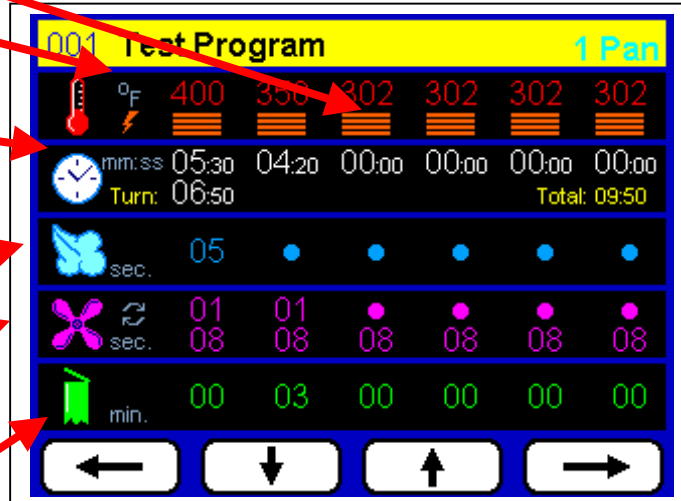
## FAN CYCLES

## FAN DWELL

(seconds)

## DAMPER DELAY

(from start of bake phase)



## PROGRAM TITLE

Press (6) to go up alphabet, press (5) to go down alphabet. After each letter has been chosen press (4) to go to next position. If a mistake is made, pressing (1) will go back to previous position.

WHEN ALL PARAMETERS ARE COMPLETE PRESS (stop) THREE TIMES TO SAVE THE SETTINGS. REPEAT FOR EACH PROGRAM REQUIRED.

# 11.0

## PROGRAMMING INSTRUCTIONS (UPLOAD/DOWNLOAD) USING “MONOLINK 6” SOFTWARE

### SETTING UP THE CONNECTION

1. Ensure that “MONOLINK 6” is installed on your computer and the oven is showing the start screen (Dunkin Donut logo)
2. Connect oven to the computer using a null modem cable **A** as shown below.  
(2 X 9 WAY D-TYPE CONNECTOR – BOTH FEMALE)

**A**



NULL MODEM CABLE  
(2 X 9 WAY D-TYPE CONNECTOR – BOTH FEMALE)

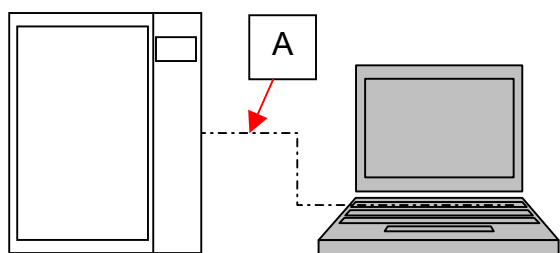
**B**



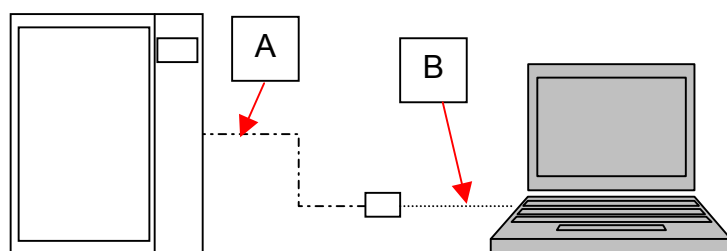
USB – SERIAL ADAPTOR WILL BE NEEDED IF A SERIAL PORT IS NOT AVAILABLE ON THE COMPUTER BEING USED.



LOOK FOR SOCKET ON THE SIDE OF THE OVEN CONTROL PANEL. REMOVE PLASTIC COVER TO EXPOSE THE CONNECTIONS.



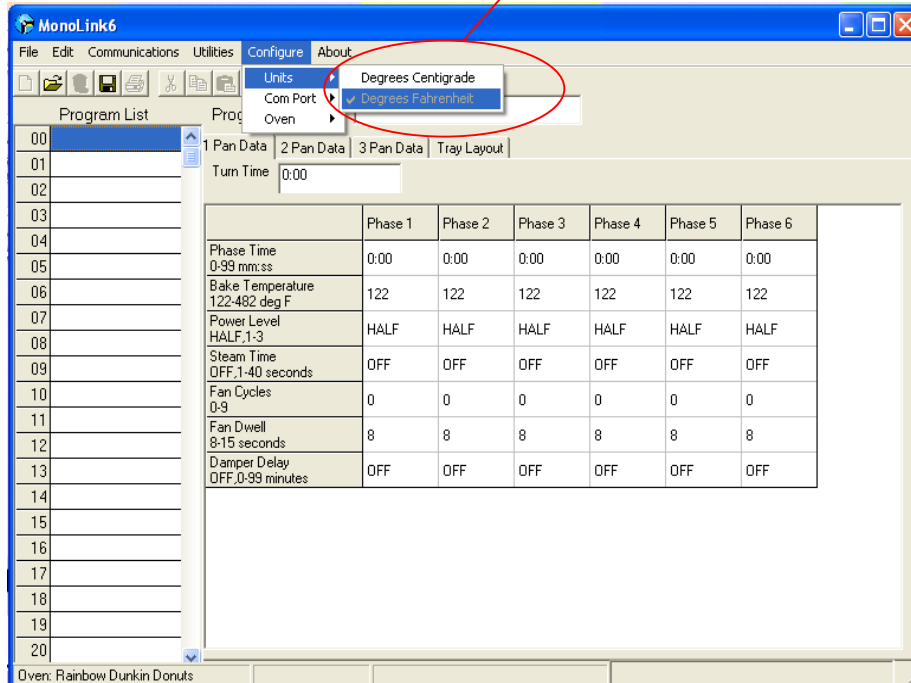
SERIAL TO SERIAL CONNECTION



SERIAL TO USB CONNECTION

# SETTING UP THE PROGRAM

1. Start “MONOLINK 6” on the computer.
2. Go to “**configure / units**” and ensure that “**Degrees Fahrenheit**” is ticked.

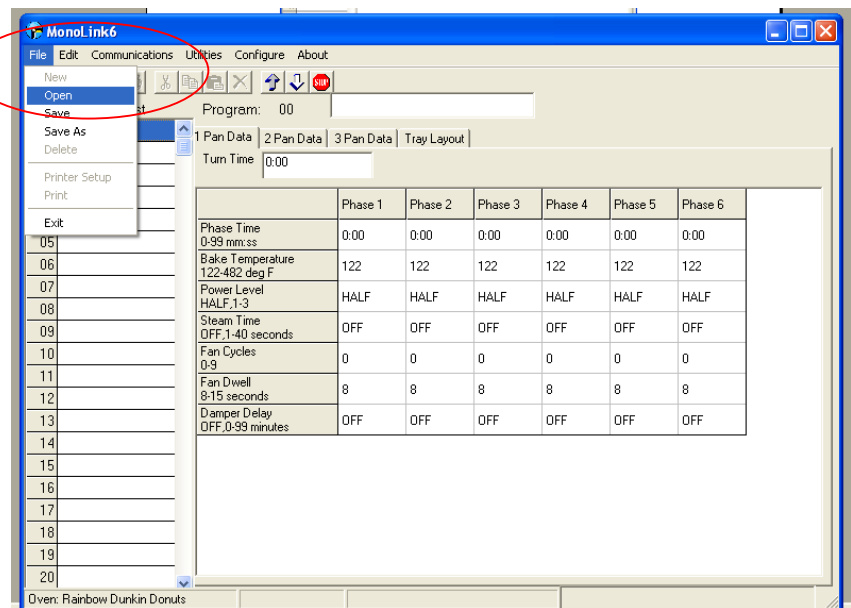


3. Go to “**configure / oven**” and ensure that “**Rainbow Dunkin Donuts**” is ticked.

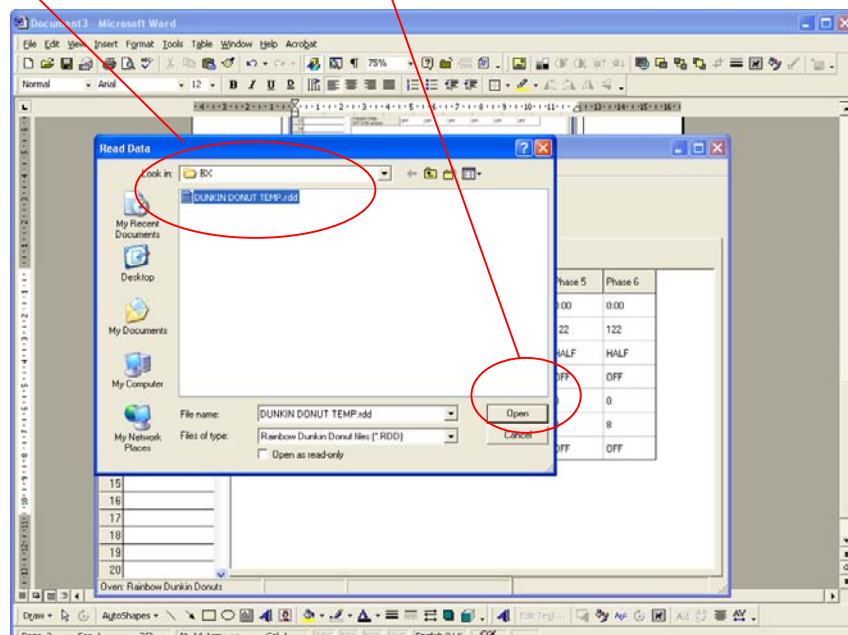


# TO CHANGE A PROGRAM

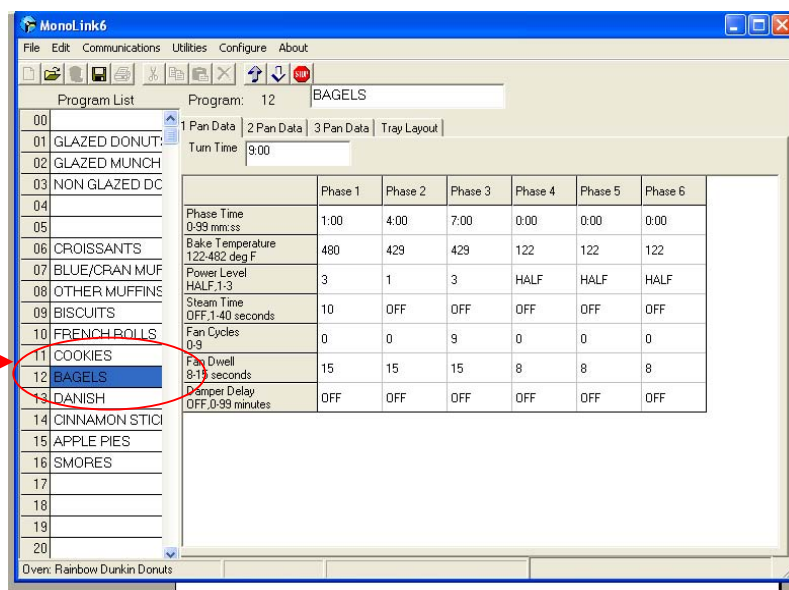
1. Go to “file / open”



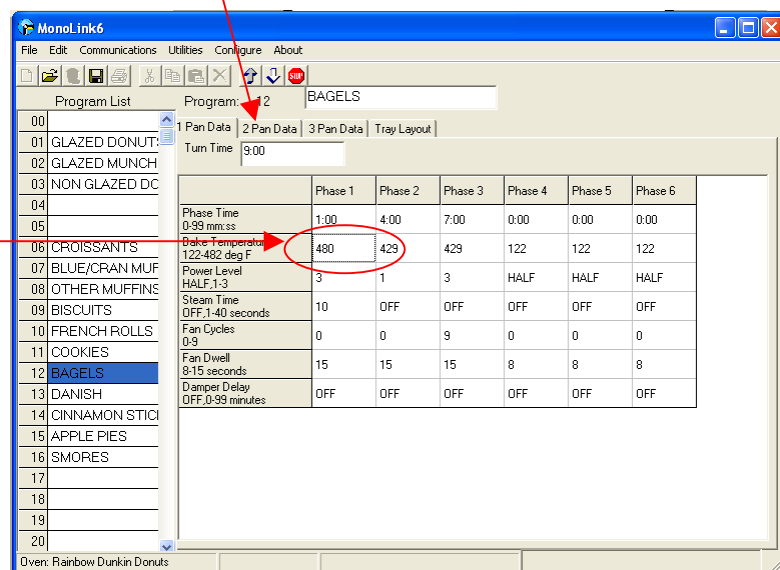
2. Find the file required, highlight it and click on “open”



### 3. Highlight the product to change



### 4. Remember to choose 1 pan, 2 pan, or 3 pan, then click on the information to be changed. Enter the new number and press return.



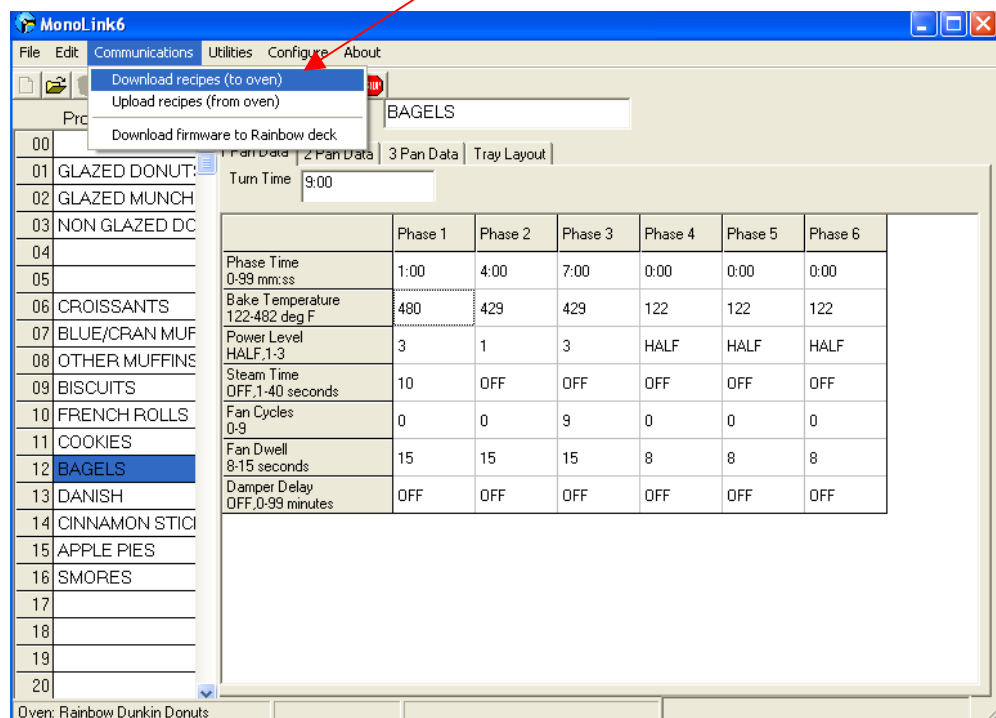
### 5. Go to "file/save" to save the changes or "file /save as" to save as a different file.



## TO DOWNLOAD PROGRAM TO OVEN

1. Ensure the computer is connected to the oven and the correct program is loaded on the screen, then go to “**Communications/Download recipes (to oven)**”

The oven will show a counter (up to 99) in the corner of the screen which will disappear when the download is complete.

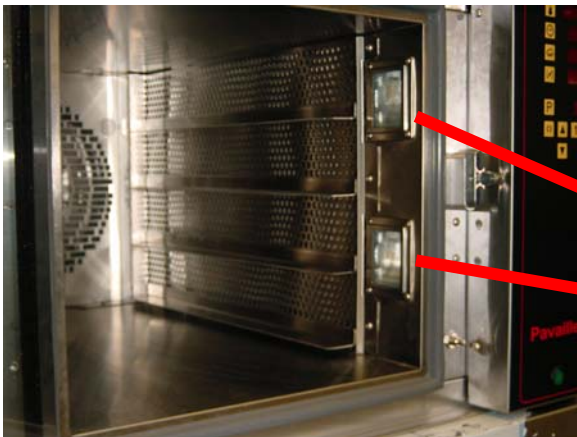


## 12.0 LIGHT BULB REPLACEMENT

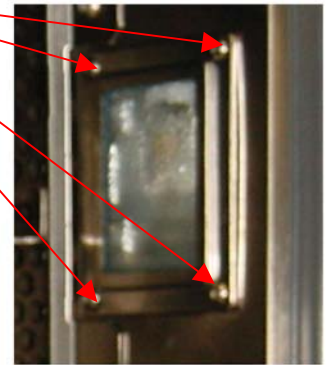
Replacement bulb part number B721-67-001

In the event of a bulb failure, Instructions on how to change a bulb are as follows: -

- Unplug oven from wall receptacle and allow oven to cool completely.
- Remove screws (4 per light) and take glass off lamp unit.



SCREWS



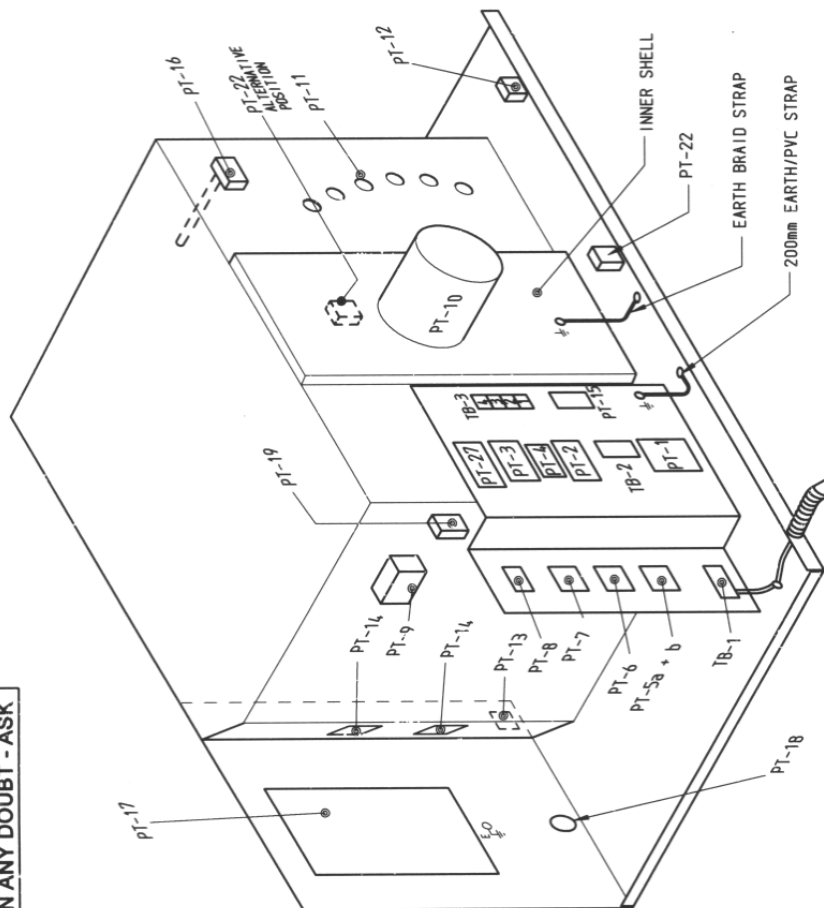
- Remove bulb by unscrewing anticlockwise and replace with new bulb.
- Refit glass front taking care that gasket is in position around stainless steel frame.
- Re-connect oven and test.

### NOTE:

Bulbs can be ordered from Adamatic as part number B772-94-001  
or sourced locally as 125v 25w SES oven bulb (300deg C)

## **13.0 REPLACEMENT PARTS**

IF IN ANY DOUBT - ASK



DRAWING PT-Ref	DESCRIPTION	PAN
PT-1	24V DC POWER SUPPLY UNIT	B801-93-005
PT-2a	INTERIOR LIGHT RELAY	B723-37-004
PT-2b	INTERIOR LIGHT RELAY BASE	B723-36-001
PT-3	CONTROL CIRCUIT M.C.B.	B851-22-010
PT-4	INTERIOR LIGHT M.C.B.	B851-22-011
PT-5a	FAN MOTOR OVERLOAD UNIT	B801-03-023
PT-5b	FAN MOTOR OVERLOAD AUXILIARY CONTACT	B801-14-012
PT-6	FAN MOTOR FORWARD CONTACTOR	B801-08-031
PT-7	FAN MOTOR REVERSE CONTACTOR	B801-08-031
PT-8	HEATING ELEMENT CONTACTOR	B801-08-022
PT-9	DAMPER SOLENOID (L/H)	B749-83-003
PT-10	DAMPER SOLENOID (R/H)	B749-83-004
PT-11	FAN MOTOR UNIT	B720-74-001
PT-12	HEATING ELEMENT	B847-04-070
PT-13	4T WATER INLET ASSY	158-17-00300
PT-14a	DOOR SWITCH	B801-11-001
PT-14b	INTERIOR LIGHT UNIT	B721-67-007
PT-15	INTERIOR LIGHT BULB	B772-94-001
PT-16	BUZZER	B982-92-002
PT-17	THERMOCOUPLE	B873-95-002
PT-18	PCB ASSY	M158-25-15900
PT-19	MAIN ON/OFF SWITCH	B836-07-005
PT-22	REAR FAN UNIT	B869-75-028
PT-27	OVERHEAT THERMOSTAT	B888-30-015
	FAN FUSE	B842-85-025

DOOR LATCH  
DOOR SEAL  
DOOR HINGE  
CATCH PAN

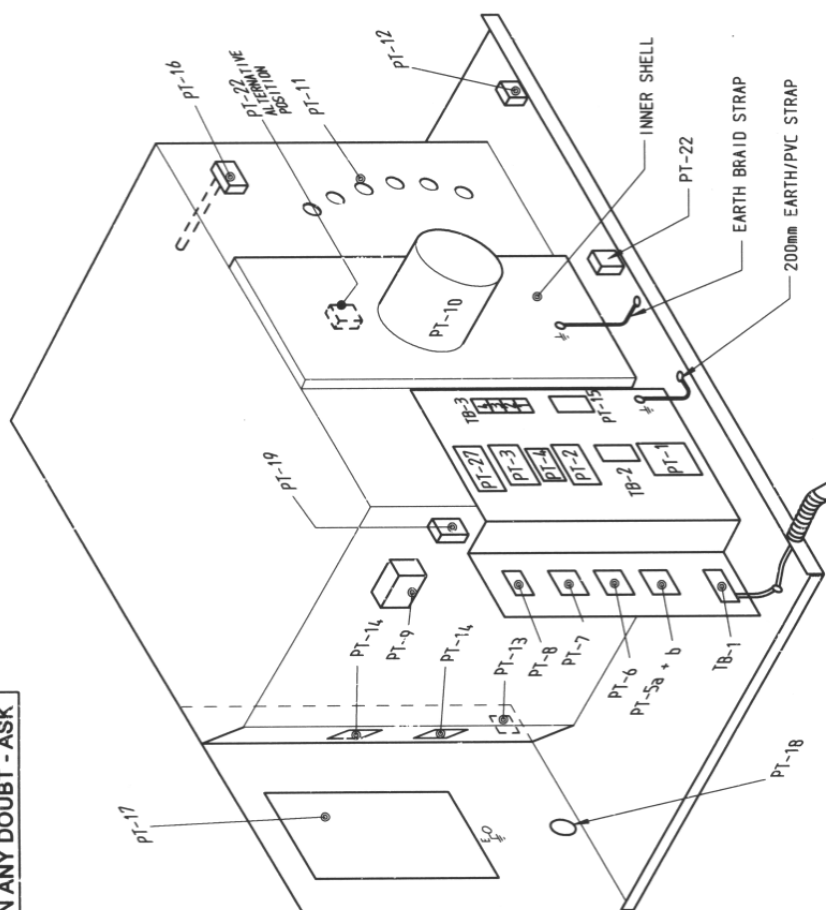
A900-27-118  
159-03-01700  
159-03-10500  
159-03-10501  
205-12-00500

TITLE: ELECTRICAL COMPONENTS LAYOUT BXC 4 TRAY OVEN UL APPROVED		ELECTRICALLY APPROVED BY:- A. THOMAS	
DRAWN: JC	DATE: 30-4-02	DRAWING NO. M189E25-01000	REV: K
208-220V 60Hz 3PH + NEUTRAL + GROUND			

## **14.0 ELECTRICAL INFORMATION**

208V – 220V 60Hz , 3PH + NEUTRAL + GROUND and 120v 1PHASE + N + GROUND

IF IN ANY DOUBT - ASK

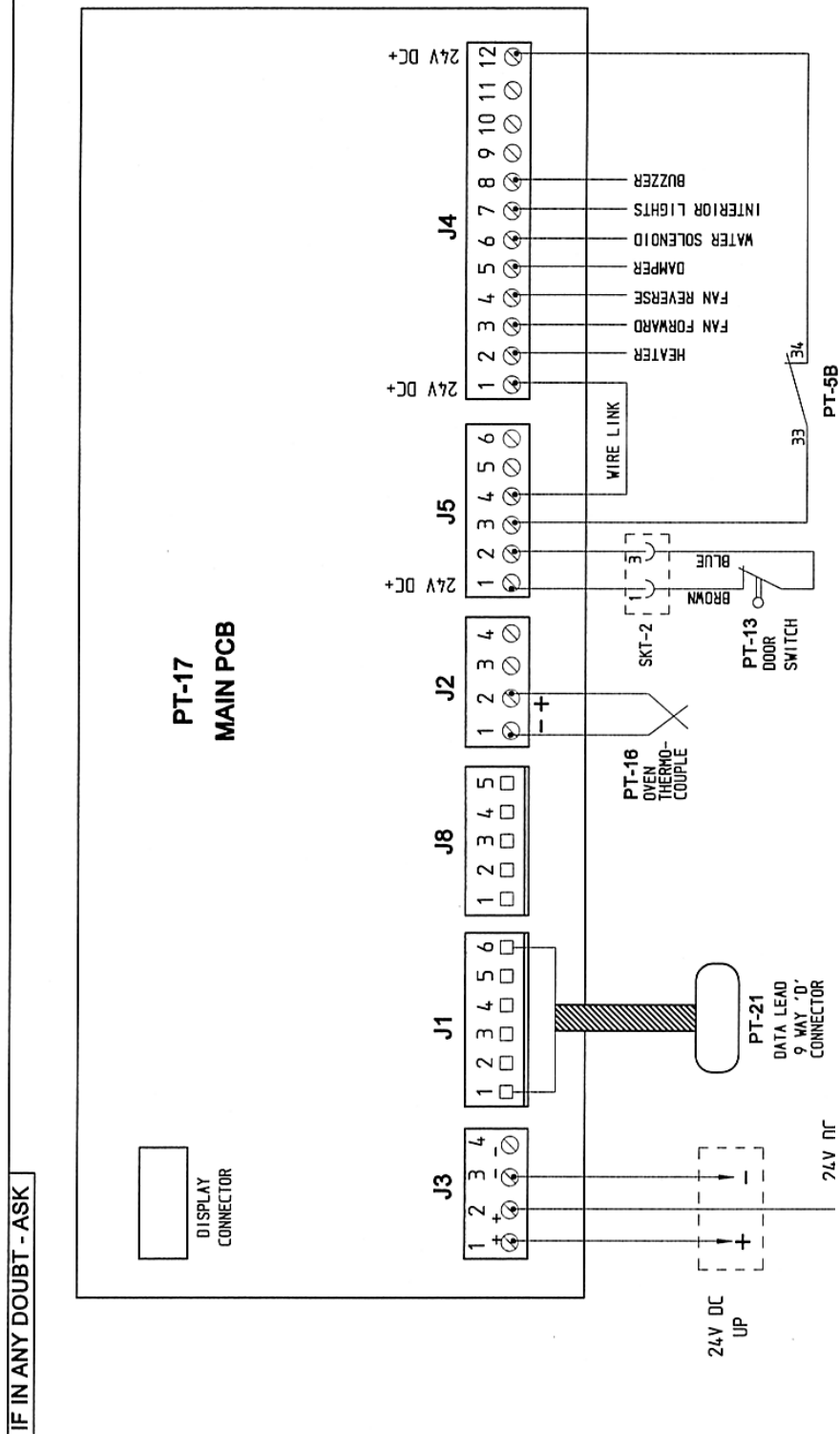


DRAWING PT-Ref	DESCRIPTION	MONO PART NUMBER
PT-1	24V DC POWER SUPPLY UNIT	B801-93-005
PT-2a	INTERIOR LIGHT RELAY	B723-37-004
PT-2b	INTERIOR LIGHT RELAY BASE	B723-36-001
PT-3	CONTROL CIRCUIT M.C.B.	B851-22-010
PT-4	INTERIOR LIGHT M.C.B.	B851-22-011
PT-5a	FAN MOTOR OVERLOAD UNIT	B801-03-023
PT-5b	FAN MOTOR OVERLOAD AUXILIARY CONTACT	B801-14-012
PT-6	FAN MOTOR FORWARD CONTACTOR	B801-08-031
PT-7	FAN MOTOR REVERSE CONTACTOR	B801-08-031
PT-8	HEATING ELEMENT CONTACTOR	B801-08-022
PT-9	DAMPER SOLENOID (L/H)	B749-83-003
PT-10	DAMPER SOLENOID (R/H)	B749-83-004
PT-11	FAN MOTOR UNIT	B720-74-001
PT-12	HEATING ELEMENT	B847-04-070
PT-13	4T WATER INLET ASSY	158-17-00300
PT-14	DOOR SWITCH	B801-11-001
PT-15	INTERIOR LIGHT UNIT	B721-67-007
PT-16	INTERIOR LIGHT BULB	B772-94-001
PT-17	Buzzer	B982-92-002
PT-18	THERMOCOUPLE	B873-95-002
PT-19	PCB ASSY	M158-25-15900
PT-20	MAIN ON/OFF SWITCH	B836-07-005
PT-21	REAR FAN UNIT	B869-75-028
PT-22	OVERHEAT THERMOSTAT	B888-30-015
PT-23	FAN FUSE	B842-85-025

TITLE: ELECTRICAL COMPONENTS LAYOUT BXC 4 TRAY OVEN UL APPROVED		ELECTRICALLY APPROVED BY:- A. THOMAS	
DRAWN: JC	DATE: 30-4-02	DRAWING NO. M189E25-01000	REV K

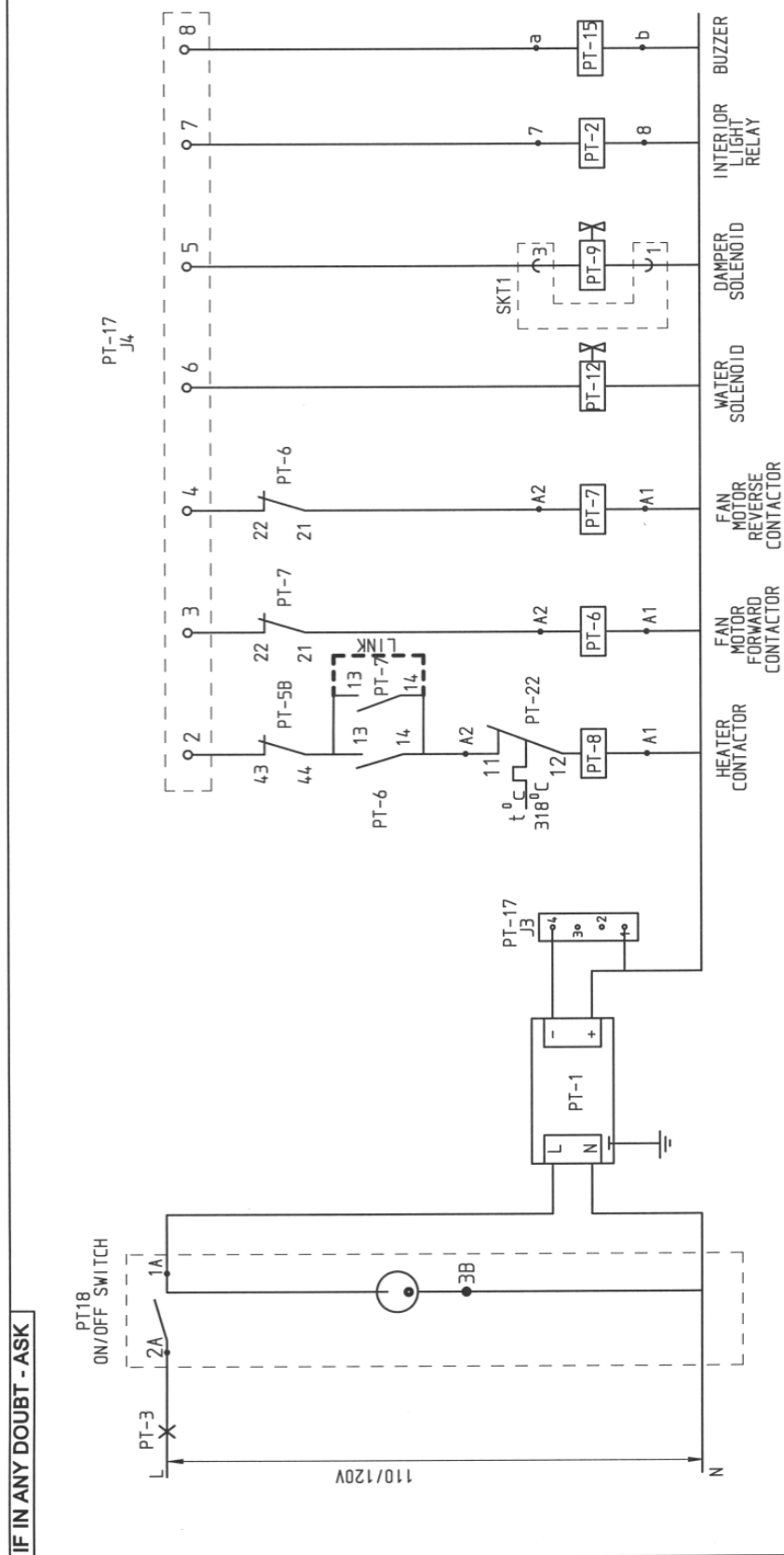
208-220V 60Hz  
3PH + NEUTRAL + GROUND

## CONTROL PANEL WIRING DIAGRAM



REVISION	ECN NO.
TITLE: BXC 4 TRAY OVEN PCB CONNECTIONS	
DRAWN: JC	ELECTRICALLY APPROVED BY:- P. BOYLES
DATE: 15-3-2	DRAWING NO. M158E25-21000 REV: —

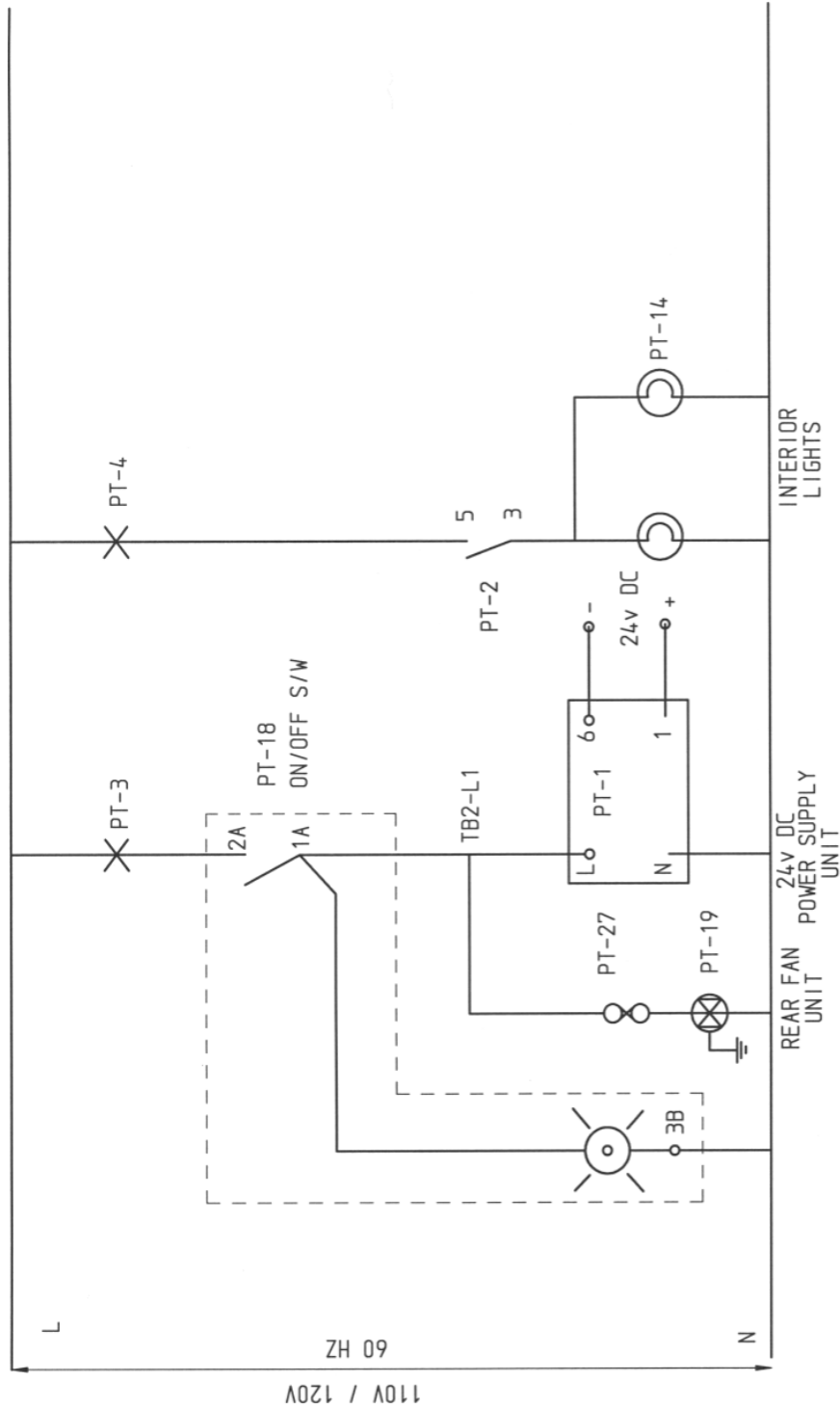
## CONTROL PANEL OUTPUT SCHEMATIC



REVISION		ECN NO.
TITLE:		
P.C.B. OUTPUTS 4 TRAY BXC OVEN		
MULTI CABLE	UL APPROVED	DUNKIN DONUTS
DRAWN: ELECTRICALLY APPROVED BY:-		
JC/RAC	P. BOYLES	
DATE: 14-2-08	DRAWING NO.	REV:
		M189E25-03200
--		

# 110V WIRING SCHEMATIC

IF IN ANY DOUBT - ASK



TITLE: CONTROL CIRCUIT BXC OVEN

UL APPROVED

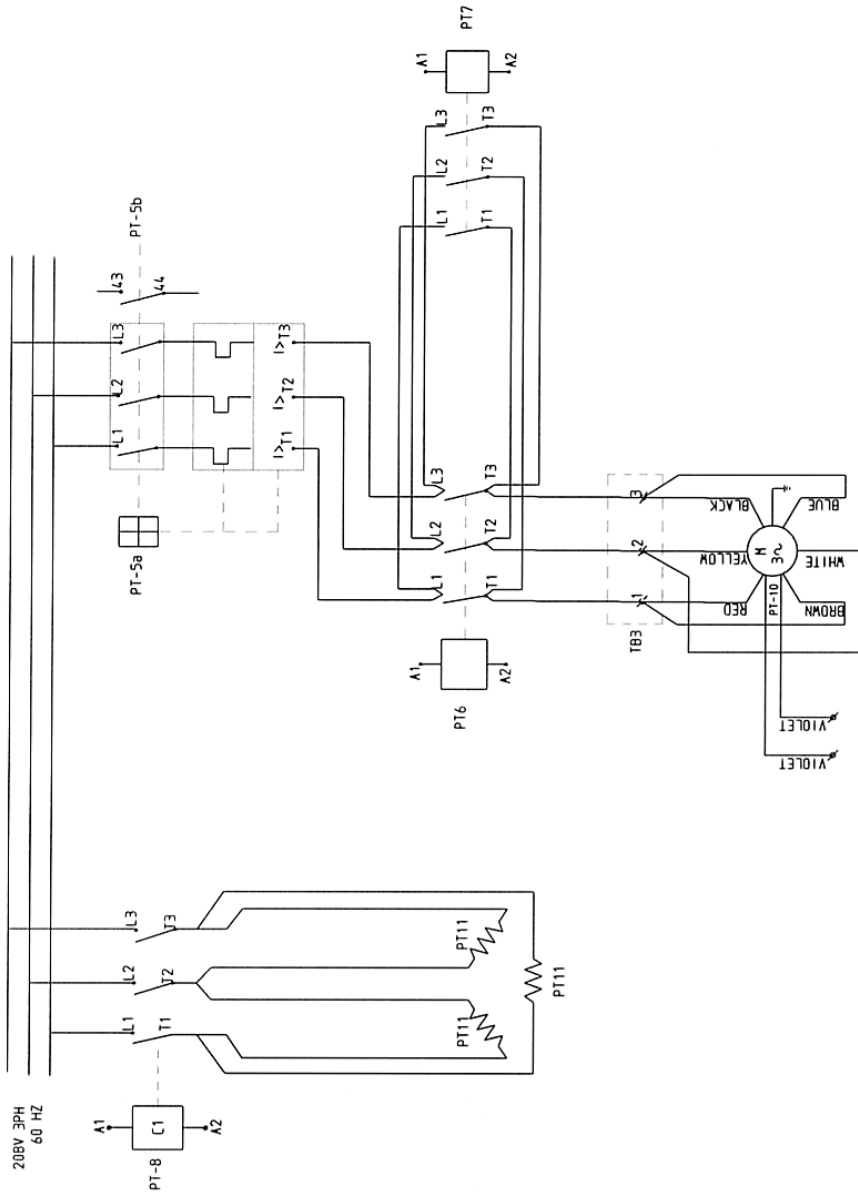
DRAWN: JC  
ELECTRICALLY APPROVED BY: P. BOYLES

DATE: 2-5-02  
DRAWING NO. M189E25-00400  
REV: B

ELECTRICAL SPECIFICATIONS:-  
208v/220v 3Ph+N+E 60Hz

# 208V WIRING SCHEMATIC

IF IN ANY DOUBT - ASK

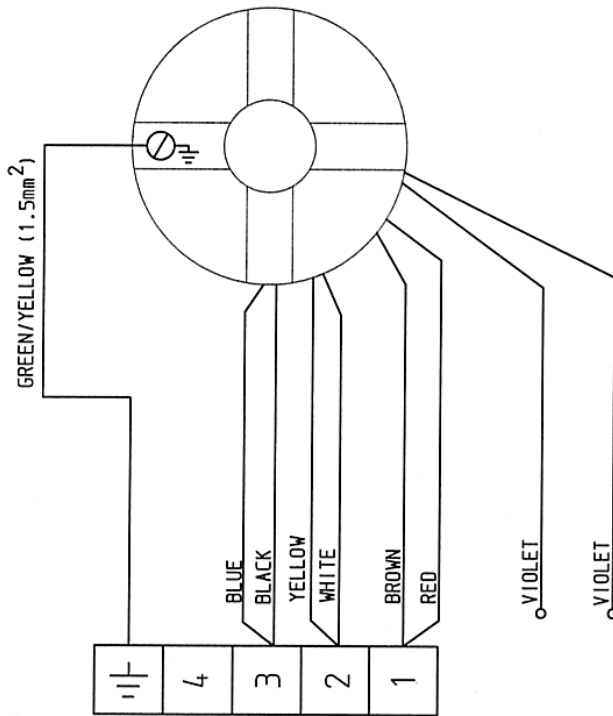


REVISION	ECN NO.
TITLE:	
POWER CIRCUIT DIAGRAM 4 TRAY OVEN UL APPROVED	
DRAWN: JC	ELECTRICALLY APPROVED BY:- P. BOYLES
DATE: 30-4-02	DRAWING NO. M189E25-00100
	REV: -

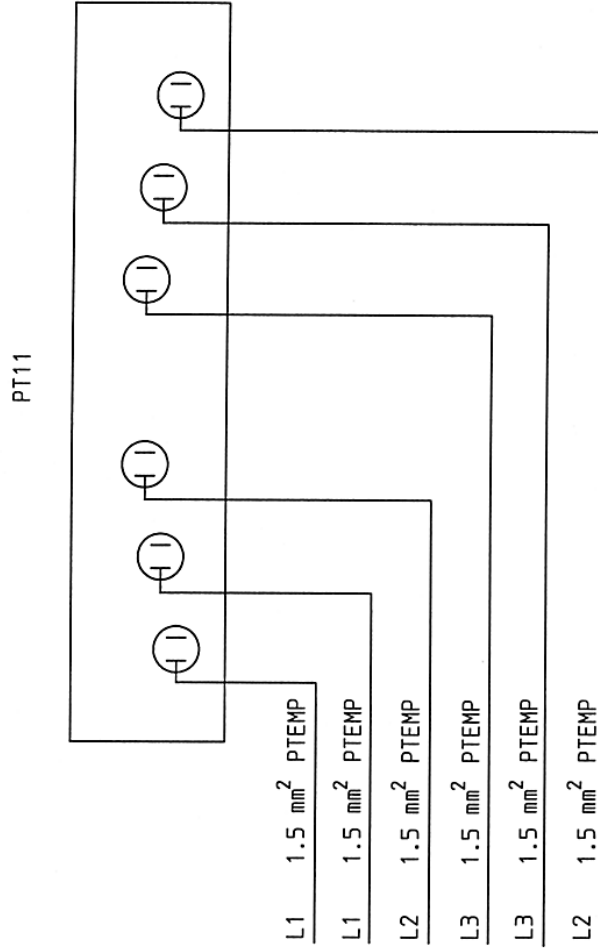
# BLOWER MOTOR: HEATING ELEMENT WIRING DIAGRAM

IF IN ANY DOUBT - ASK

## HEATING ELEMENT WIRING



## FAN MOTOR CONNECTIONS



TITLE: FAN MOTOR CONNECTIONS & HEATING ELEMENT WIRING			
DRAWN: JC		UL APPROVED	
ELECTRICALLY APPROVED BY:-		P. BOYLES	
DATE: 2-5-02	DRAWING NO. M189E25-00500	REV: -	

# ADAMATIC

814  
44<sup>TH</sup> St. NW  
Suite 103  
Auburn,  
WA 98001  
USA

Tel. 800.526.2807

Fax: 206 322 5425

Web: [www.adamatic.com](http://www.adamatic.com)